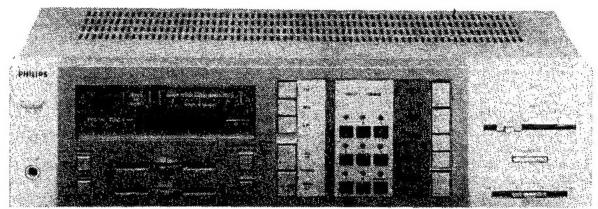


**Service  
Service  
Service**

32 935AI2

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# Service Manual

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## TECHNISCHE DATEN

### FM-Teil

Wellenbereich	: 87,5-108 MHz
Empfindlichkeit (98 MHz, $\Delta f$ 75 kHz bei 75 $\Omega$ )	: Mono $\leq 1 \mu V$ (26 dB S/R) : Stereo $\leq 22 \mu V$ (46 dB S/R)
ZF	: 10,7 MHz
Trennschärfe	: 60 dB (300 kHz ausser Resonanz)
Gesamtklirrfaktor	: Mono 0,09% : Stereo 0,25%
Antenneneingang	: 75/300 $\Omega$

### AM-Teil

Wellenbereich	: SW 153-360 kHz
Empfindlichkeit (600 kHz)	: MW 522-1611 kHz
Trennschärfe	: 100 $\mu V$ (26 dB S/R) : 30 dB (9 kHz ausser Resonanz)

### Digitaler Teil

Voreinstellungen	: FM, 8 AM, 8 (random)
Speicher	: Nicht flüchtig

### LF-Teil

Eingänge	: Phono 2.8 mV/47 k $\Omega$
	: Aux/CD 160 mV/33 k $\Omega$
	: Tape/Video 160 mV/33 k $\Omega$
Ausgänge	: Leistung: 2x32 W (I.E.C.) $d = 0,05\%$ (2x8 $\Omega$ )
	: Kopfhörer 8-1000 $\Omega$
	: TAPE 450 mV/800 $\Omega$

### Allgemeines

Netzspannung	: 220 V/240 V 50/60 Hz~
Leistungsaufnahme	: 155 W (bei 2x32 W)
Abmessungen	: 420x100x194 mm

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

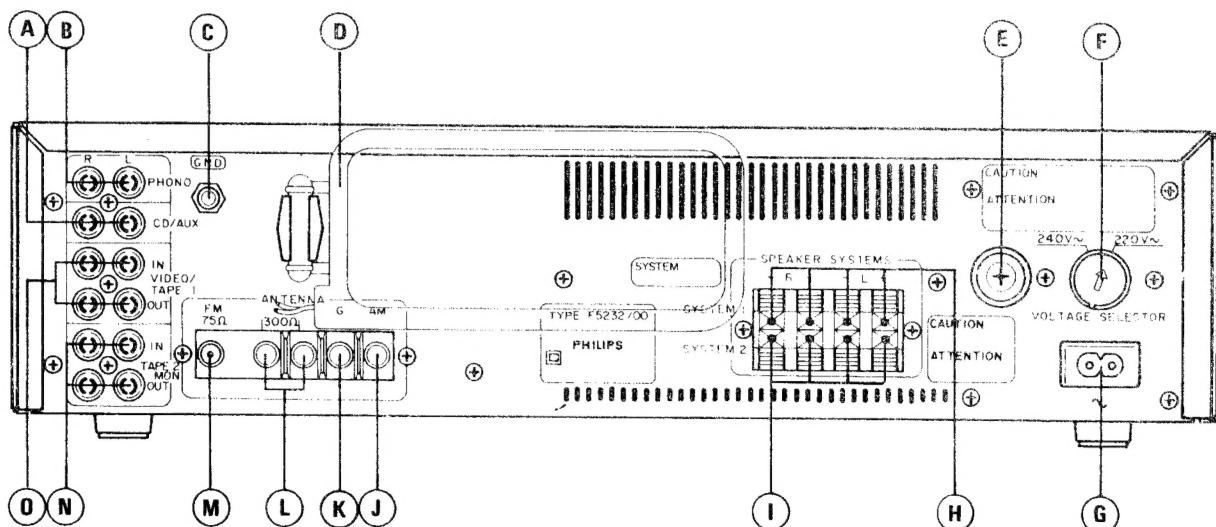
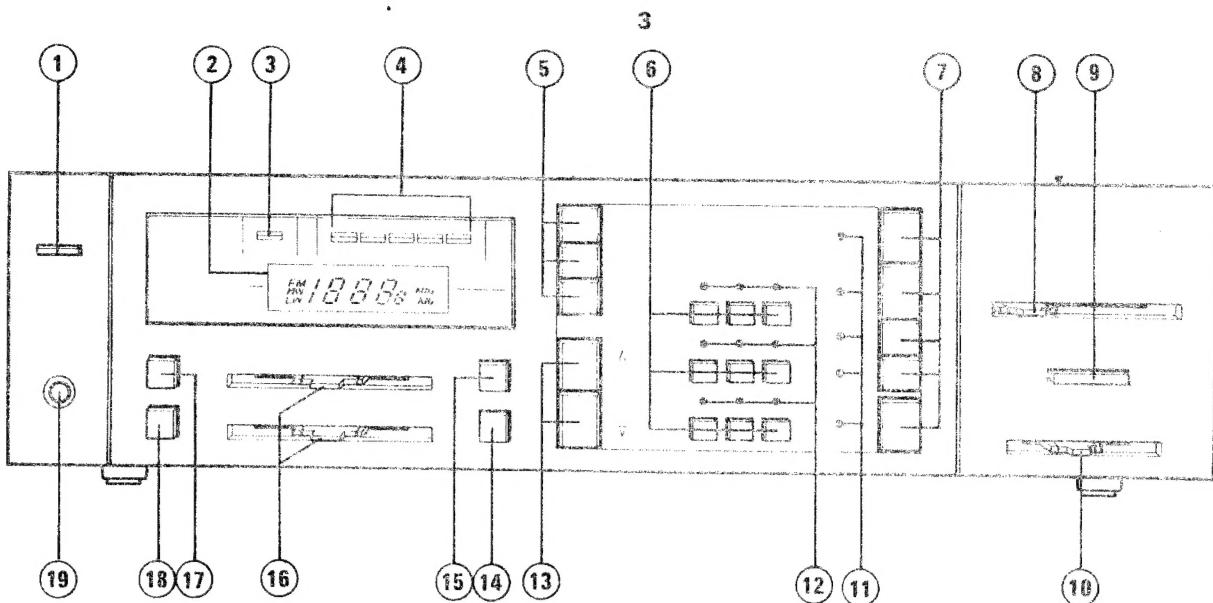
Für eine mehr detaillierte technische Spezifikation verweisen wir auf die kommerzielle Dokumentation.

### Warnung 220 V/240 V

Durch Abnahme des Obergehäuses werden die hinausragenden spannungsführenden Teile des Netzschalters und des Netztransformators berührbar; daher ist äusserste Vorsicht geboten, wenn das Gerät an die Netzspannung gelegt wird.

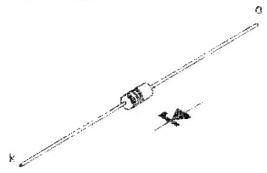
### Ausbauvorschrift

Für die Ausbauvorschrift siehe die Explosionszeichnung auf Seiten 25 und 26.

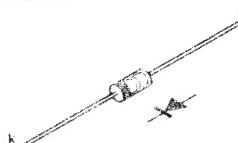


### Anschlüsse und Einstellungen

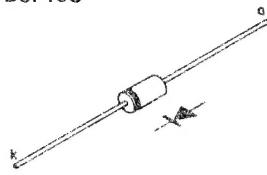
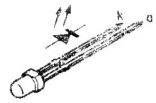
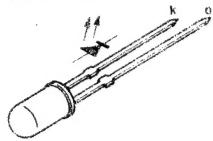
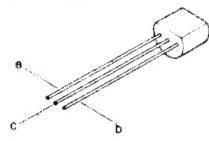
1	Netzschalter	S001	A	Phono-Eingang	
2	Display	V501	B	CD/AUX-Eingang	JV01
3	UKW-Stereo-Anzeiger	DX01	C	Masseverbindung	J031
4	Signalstärke-Anzeiger	DX02~DX06	D	Rahmenantenne	L051
5	UKW/MW/LW-Schalter	ST15~ST16	E	Sicherungshalter	J001
6	Vorwahl/Speicher-Schalter	ST06~ST14	F	Spannungswähler	J091
7	Funktionsschalter	ST01~ST05	G	Netzspannungs-Eingangsbuchse	J093
8	Lautstärkeregler	RS09	H	Lautsprecherausgang 1	
9	Loudnessschalter (physiologische Lautstärkekorrektur)	SS02	I	Lautsprecherausgang 2	JW02
10	Balancegregler	RS10	J	AM-Antennenanschlussbuchse	
11	Funktionsanzeiger	DT01~DT05	K	Masse	
12	Vorwahl/Speicher-Anzeiger	DT06~DT14	L	UKW-Antennenanschlussbuchse 300 Ω	J101
13	Auf-/Abwärts-Abstimmsschalter	ST18,ST19	M	UKW-Antennenanschlussbuchse 75 Ω	
14	Tiefpassfilterschalter	SS03	N	Eingang, Ausgang Band 2	JV03
15	Abtast/UKW-Stummschalter	SS01	O	Video/Eingang, Ausgang Band 1	JV02
16	Tiefen/Höhenregler	RE15,RE16			
17	Lautsprecherschalter 1	{			
18	Lautsprecherschalter 2	SN01			
19	Kopfhörerbuchse	JW50			

MA1091  
MA1110

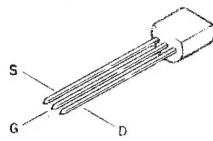
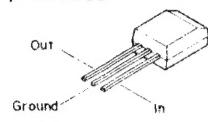
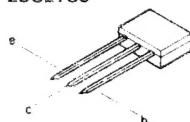
1S2473



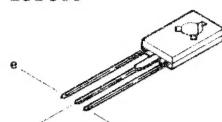
DSF10C

SLP981C  
SLP281FSEL1210S  
SEL1410E2SC829  
2SD1302

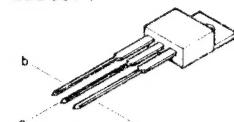
2SK30A

 $\mu$ PC78L052SA1175  
2SC2785

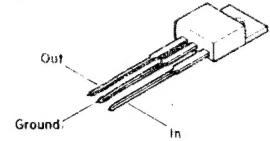
2SD985



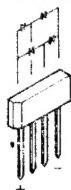
2SB507V



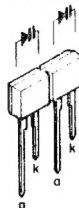
L78M15



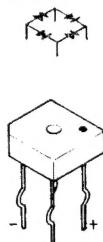
DBA10B



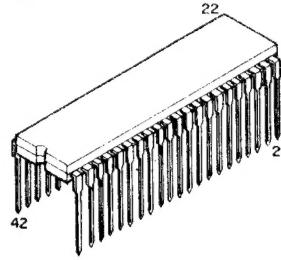
KV1236



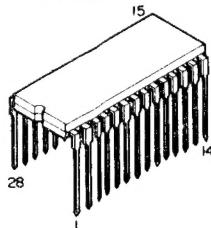
S4VB



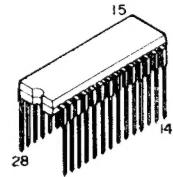
TC9147P



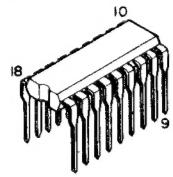
TD6301AP



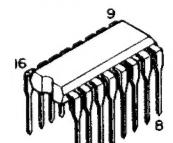
LC7815H



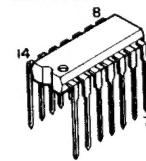
AN7273



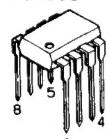
AN7470



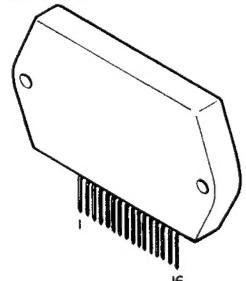
LC4066H



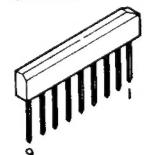
TL4558P



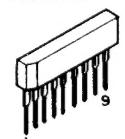
STK4843



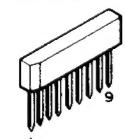
LB1413



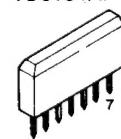
AN6135



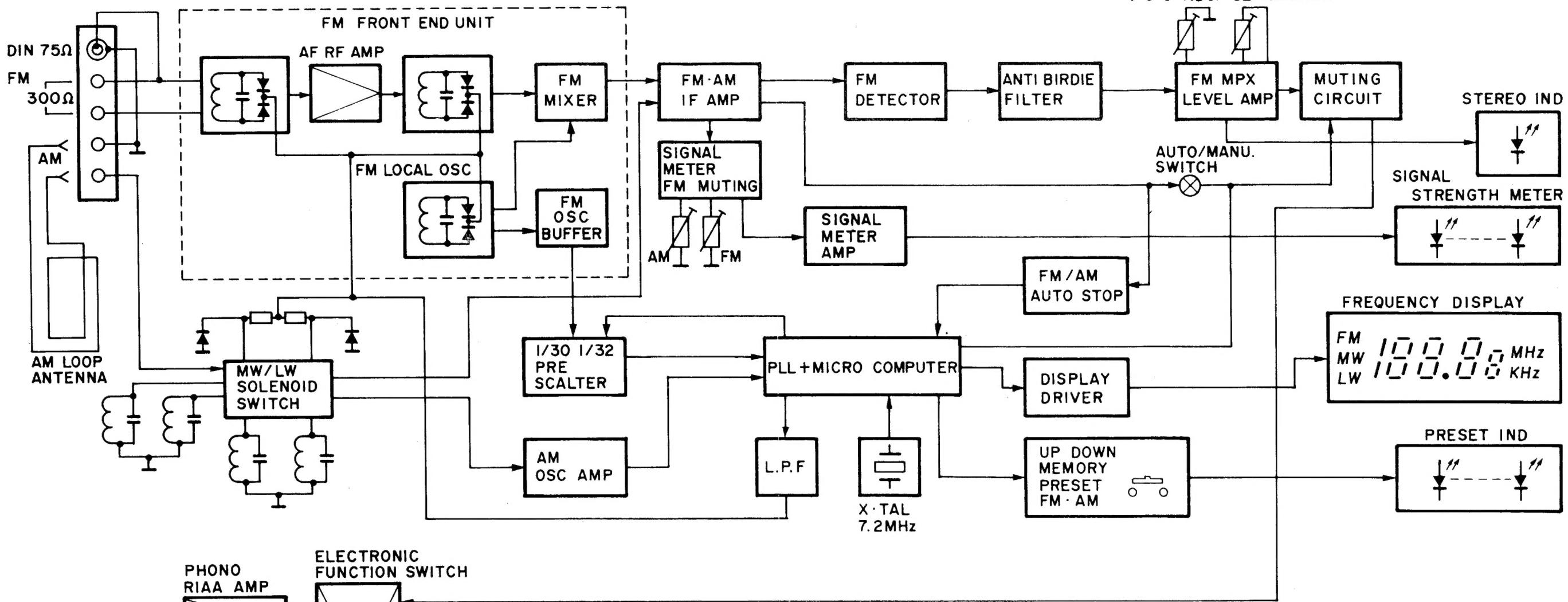
AN278



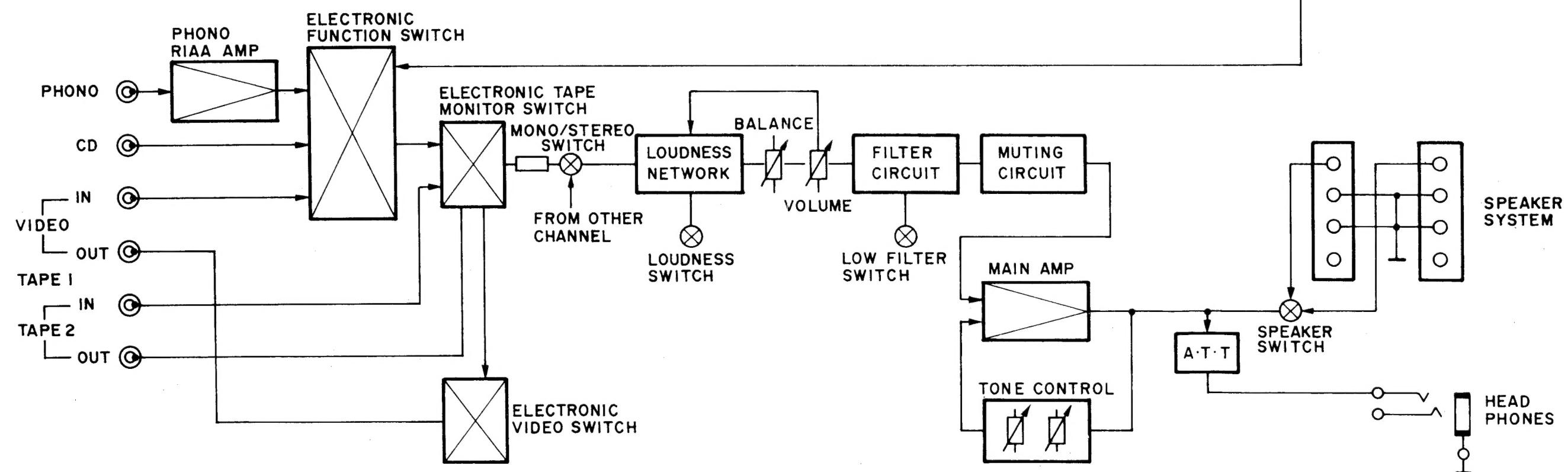
TD6104AP



## BLOCK DIAGRAM



## V·C·O ADJ. SEPARATION

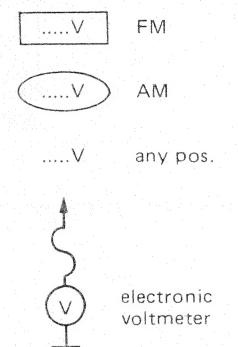
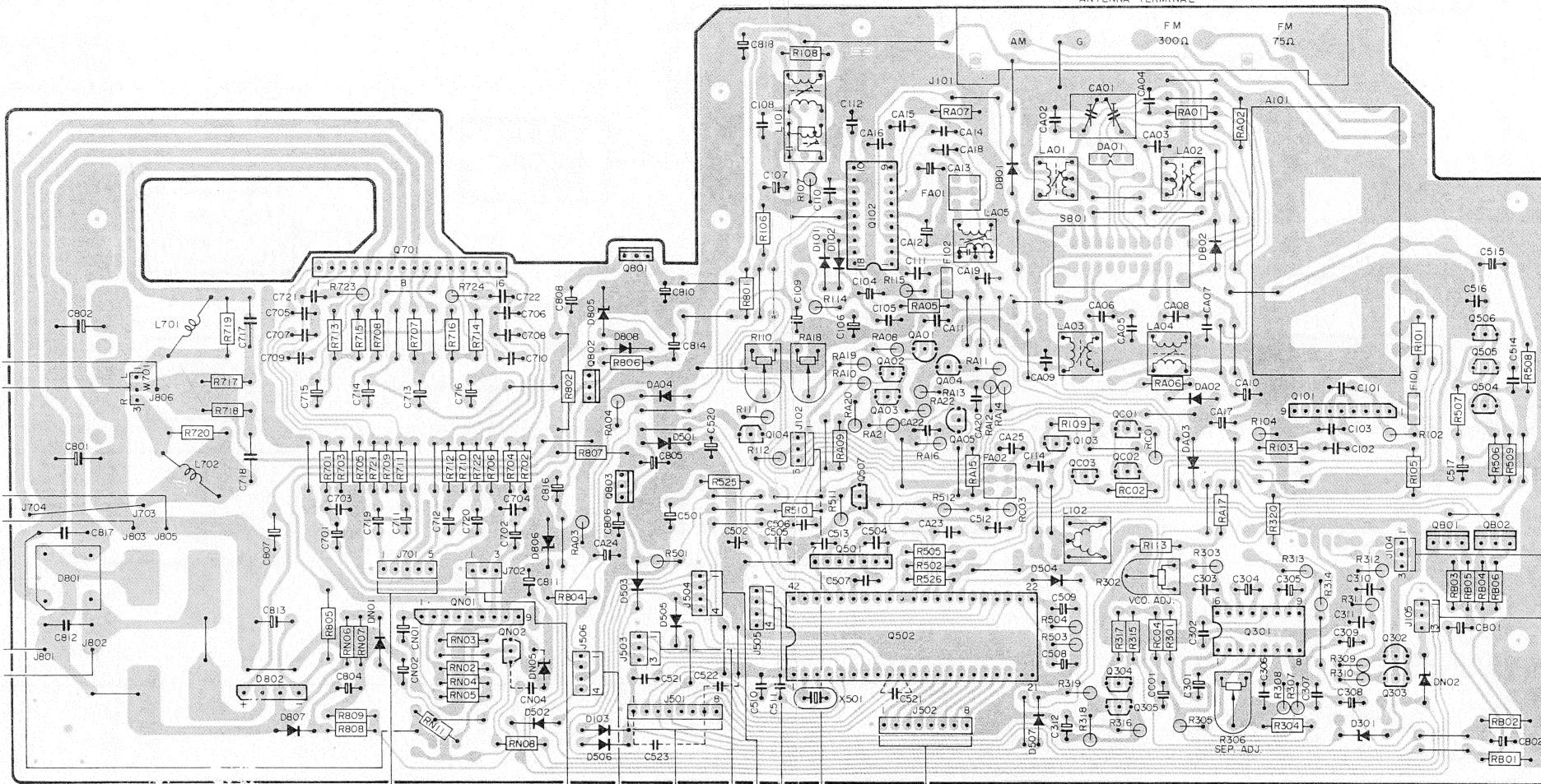


**7 FM/AM TUNER - DIGITAL - POWER SUPPLY (MAIN PANEL)**

D	D801	D802 D807	DN01	D806 D805 D806 D501~D503 D505 D805 D808 D103 D804	D101 D102	D801 D507 D504 D801 D803 D802 D802	D301 DN02
L	L701 L702			L101	LA05 LA01 LA03 L102 LA04 LA02		
C	C802 C717 C721 C713~C716 C704 C722 C706 C808 C806 C810 C814 C818			C107~C112	CA09 CA02 CA01 CA04 CA10	C515 CV17	
	C817 C801 C718 C807 C705 C701 C703 C712 C720 C702 C708 C710 C811 CA24 C501 C805 C502 C522			C521 C104~C106 CA11~CA16 C818 C819 C509 C508 CA06 CA05 CA03 CA08 CA07 CA17	CA09 CA02 CA01 CA04 CA10	C101 C310 C311 C516 CB01 C514	
	C812 C813 C709 C707 C804 C719 C711 CN01 CN02 CN04 C816 C521 C523 C520 C510 C511 C504~C507 C513 CA22 CA23 CA20 C512 CA25 C114 C312			C504~C507 C513 CA22 CA23 CA20 C512 CA25 C114 C312	CA09 CA02 CA01 CA04 CA10	C103 C102 C309 C308 C517 CB02	
R	R719 R713 R715 R708 R707 R716 R714 R802 RA03 R806 R801 R106 R107 R108 R115 RA07			R114 RA08 RA05 RA22 RA11~RA16	RA01 RA02	R312 R311 R101	
	R717 R701 R705 R709 R723 R712 R722 R724 R704 R804 R807 R525 R110~R112 R510 RA16~RA20 R511 R114 RA08 RA05 RA22 RA11~RA16			R109 RC02 RC01 RA06 R113	R304 R104 R308 R307 R314 R309 R310 R102 R505~R509		
	R720 R718 R805 RB08 RN06 RN07 R809 R703 R721 R711 RN11 R710 R706 R702 RN02~RN05 RN08 RA04 R501 RA10 RA09 RA21 R526 R502 R505 R512 RC03 R504 R503 R39 R318 R316 R317 R315 R302 RC04 R301 R303 R305 RA17 R306 R320 R103 R313 R105 RB01~RB06			R109 RC02 RC01 RA06 R113	R304 R104 R308 R307 R314 R309 R310 R102 R505~R509		
Q	Q701 QN01 QN02 Q802 Q801 Q803			Q104 Q507 Q105 Q502 QA01~QA05	Q103 Q304 Q305 QC01~QC03	Q301 Q101 Q302 Q303 QB01 QB02 Q504~Q506	

8

ANTENNA TERMINAL



QC01: B = 15.0 V 14.4 V  
C = 0.09 V 15.0 V  
E = 15.1 V 15.1 V

QC02: B = 14.3 V 14.5 V  
C = 15.0 V 0.19 V  
E = 15.1 V 15.1 V

QC03: B = 0.7 V 0.01 V  
C = 0.06 V 1.45 V  
E = 0 V 0 V

QN01: 1 = 0.75 V  
2 = 1.23 V  
3 = 1.3 V  
4 = 0.4 V  
5 = 0 V  
6 = 0 V  
7 = 0 V  
8 = 0 V  
9 = 10.3 V

QN02: B = -0.08 V  
C = 1.3 V  
E = 0 V

Q101: 1 = 4.31 V  
2 = 4.31 V  
3 = 4.53 V  
4 = 4.82 V  
5 = 7.44 V  
6 = 4.82 V  
7 = 0 V  
8 = 4.0 V  
9 = 4.63 V

Q102: 1 = 8.29 V 11.1 V  
2 = 0.55 V 11.2 V  
3 = 0.55 V 11.2 V  
4 = 0.55 V 11.2 V  
5 = 0 V 10.7 V  
6 = 0.63 V 0.77 V  
7 = 8.16 V 11.0 V  
8 = 8.15 V 11.0 V  
9 = 8.16 V 11.1 V

10 = 7.77 V 10.7 V  
11 = 0 V 0 V  
12 = 8.65 V 11.7 V  
13 = 1.76 V 3.09 V  
14 = 8.63 V 11.7 V  
15 = 0.4 V 0 V  
16 = 1.16 V 1.48 V  
17 = 1.52 V 1.40 V  
18 = 0.56 V 11.2 V

Q103: B = 3.76 V 0.18 V  
C = 3.09 V 1.76 V  
E = 0.39 V 2.74 V

Q104: B = 0.02 V 0.02 V  
C = 0.08 V 3.06 V  
E = 0 V

Q301: 1 = 1.43 V 1.43 V  
2 = 2.16 V 2.59 V  
3 = 6.05 V 6.05 V  
4 = 12.1 V 12.1 V  
5 = 12.1 V 12.1 V  
6 = 7.32 V 7.33 V  
7 = 7.41 V 0 V  
8 = 0 V  
9 = 1.36 V 1.36 V  
10 = 2.64 V 2.63 V  
11 = 2.63 V 2.60 V  
12 = 2.63 V 2.63 V  
13 = 2.63 V 2.63 V

Q302: B = 0 V  
C = 0 V  
E = 0 V

Q501: 1 = 5.05 V  
2 = 5.05 V  
3 = 4.18 V  
4 = 0 V  
5 = 0.12 V  
6 = 3.62 V  
7 = 0 V

Q303: B = 0 V  
C = 0 V  
E = 0 V

Q502: 1 = 0 V  
2 = 2.05 V  
3 = 1.7 V  
4 = 0 V  
5 = 4.3 V  
6 = 0 V  
7 = 0 V  
8 = 4.39 V  
9 = 0 V  
10 = 0 V  
11 = 0 V  
12 = 0 V  
13 = 0 V  
14 = 0 V  
15 = 0 V  
16 = 0 V  
17 = 0 V  
18 = 0 V  
19 = 0 V  
20 = 0 V  
21 = 0 V

Q304: B = 0.67 V  
C = 12.4 V  
E = 0 V

Q503: B = 0 V  
C = 0.67 V  
E = 0 V

Q504: B = 0.84 V  
C = 1.06 V  
E = 14.9 V

Q505: B = 1.06 V  
C = 7.75 V  
E = 0.62 V

Q506: B = 0.62 V  
C = 7.75 V  
E = 0 V

Q507: B = 0.62 V  
C = 0.06 V  
E = 0 V

Q801: 1 = 34.3 V  
2 = 0 V  
3 = 15.1 V

Q803: 1 = 20.1 V  
2 = 0 V  
3 = 5.04 V

QA01: B = 0 V  
C = 0 V  
E = 0.74 V  
C = 0 V  
E = 13.2 V

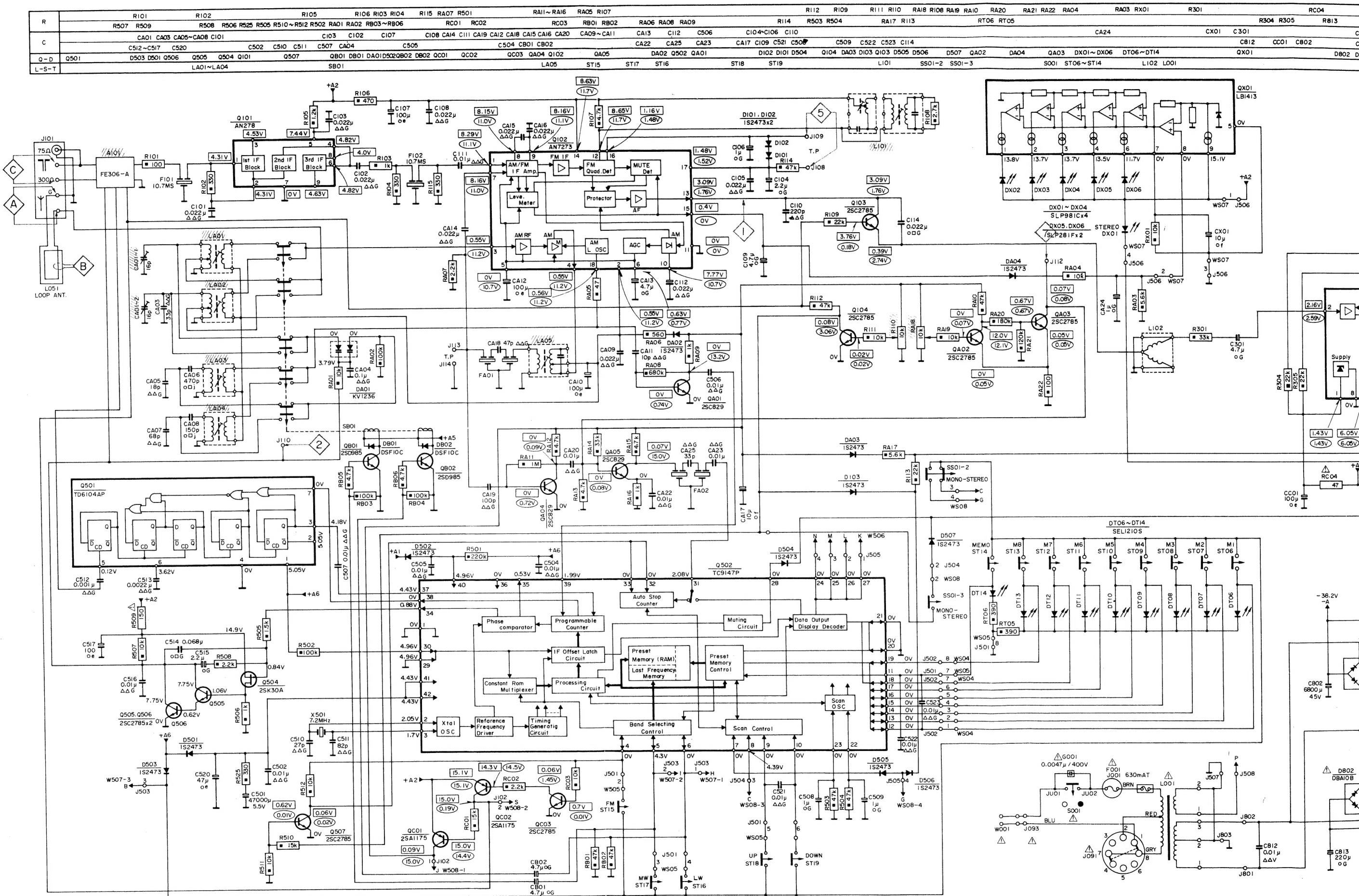
QA02: B = 0 V  
C = 12.0 V  
E = 0 V

QA03: B = 0.67 V  
C = 0.07 V  
E = 0.05 V

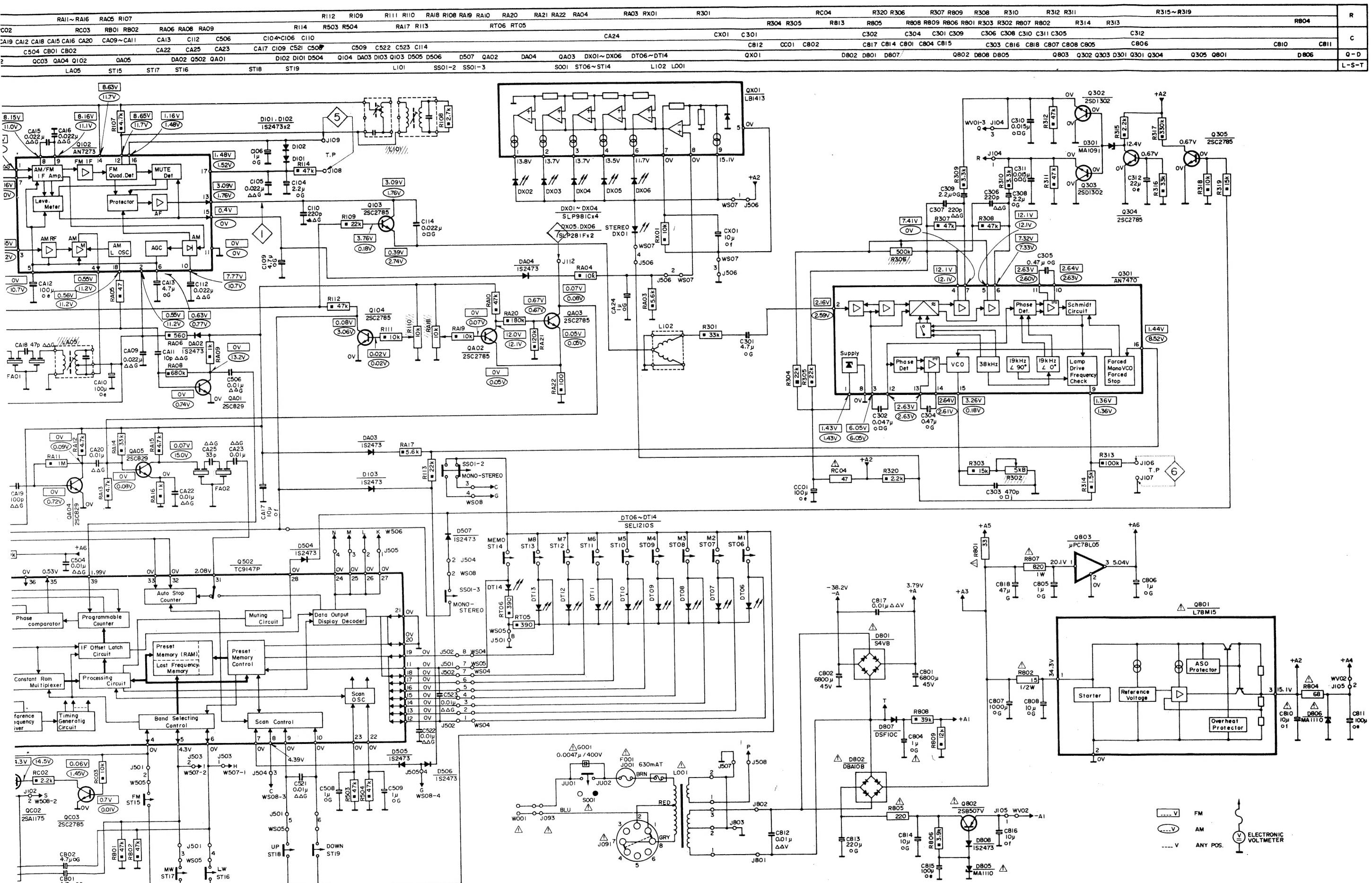
QA04: B = 0 V  
C = 0 V  
E = 0.72 V  
C = 0 V  
E = 0.09 V

QA05: B = 0 V  
C = 0.07 V  
E = 0.08 V

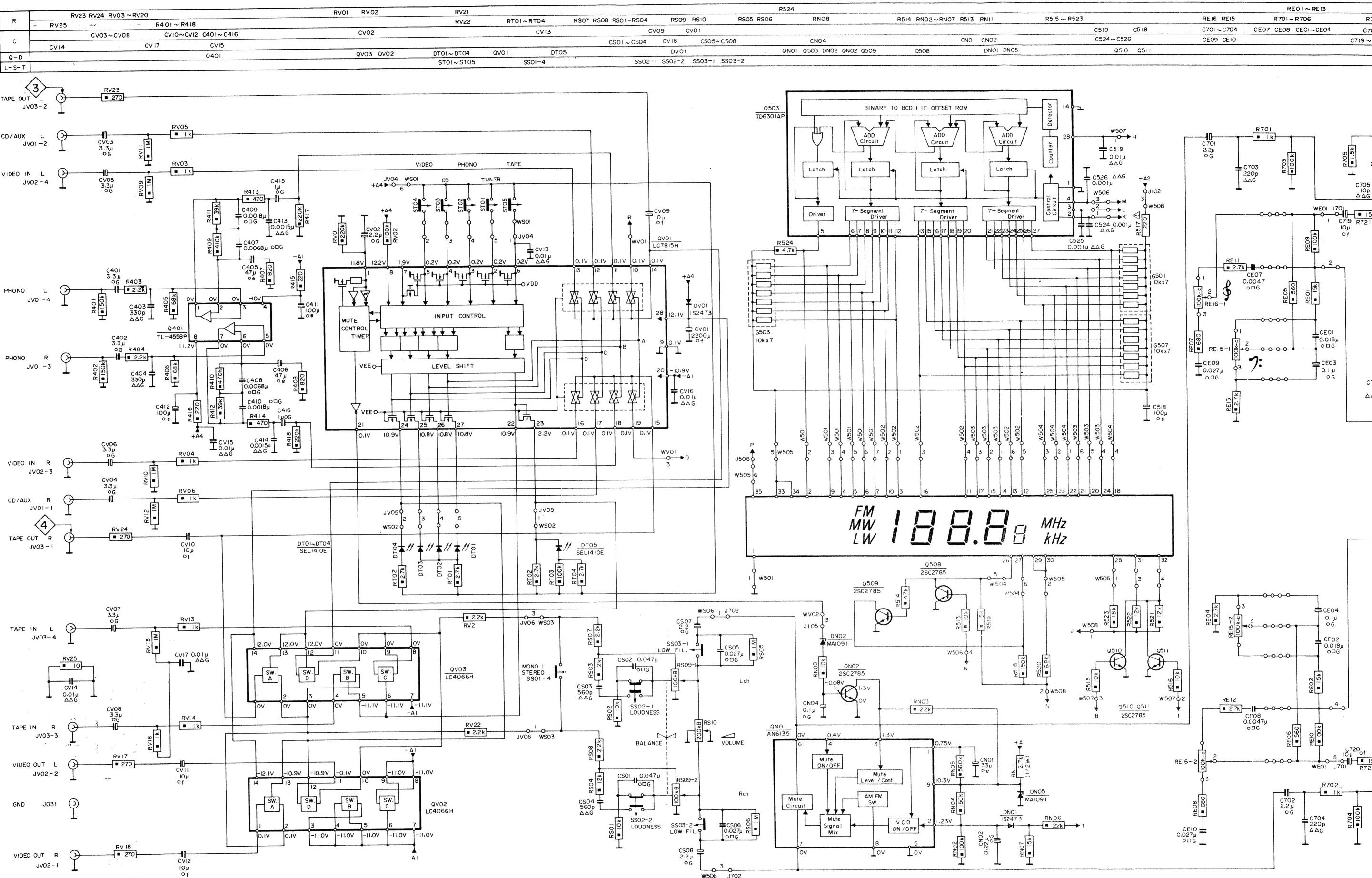
## AM - FM - TUNER - DIGITAL - POWER SUPPLY - FIELDSTRENGTH IND. - CONTROL SWITCHES - CIRCUIT DIAGRAM

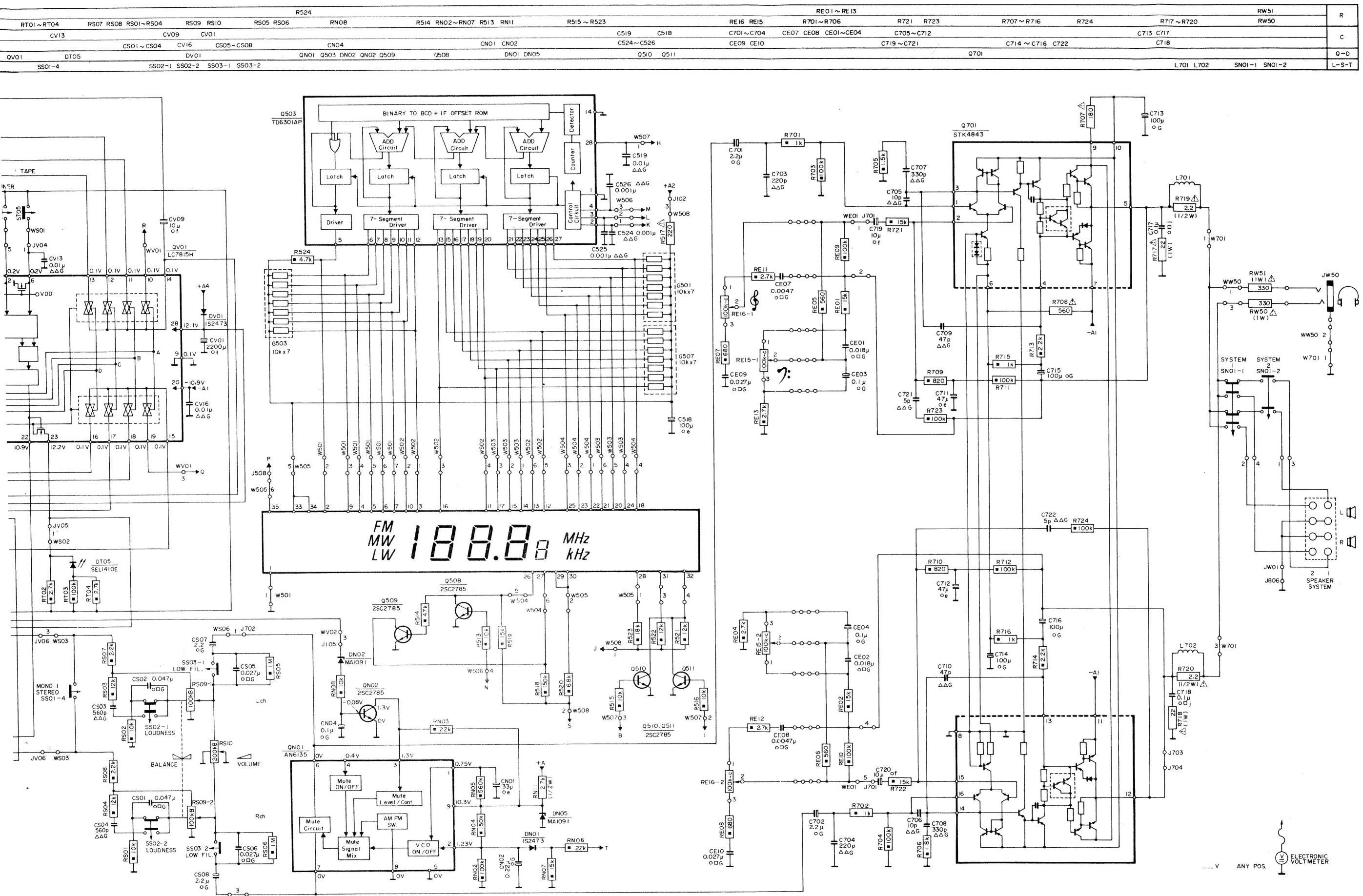


## CIRCUIT DIAGRAM

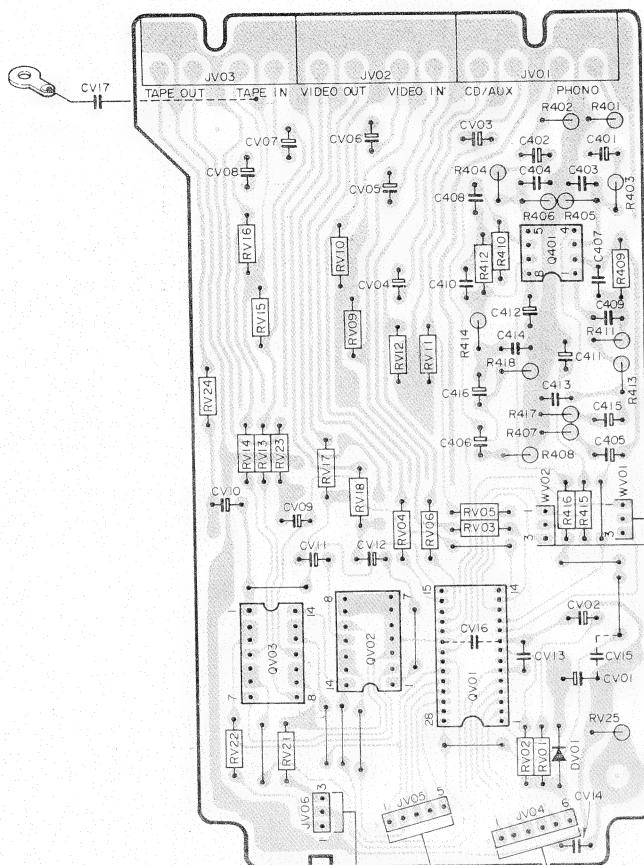
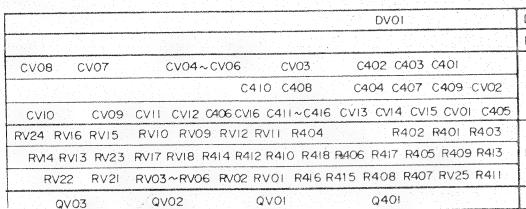


## **PHONO - INPUT - TONE CONTROL - MAIN AMP. - DISPLAY - CIRCUIT DIAGRAM**





#### **PHONO - INPUT PANEL**



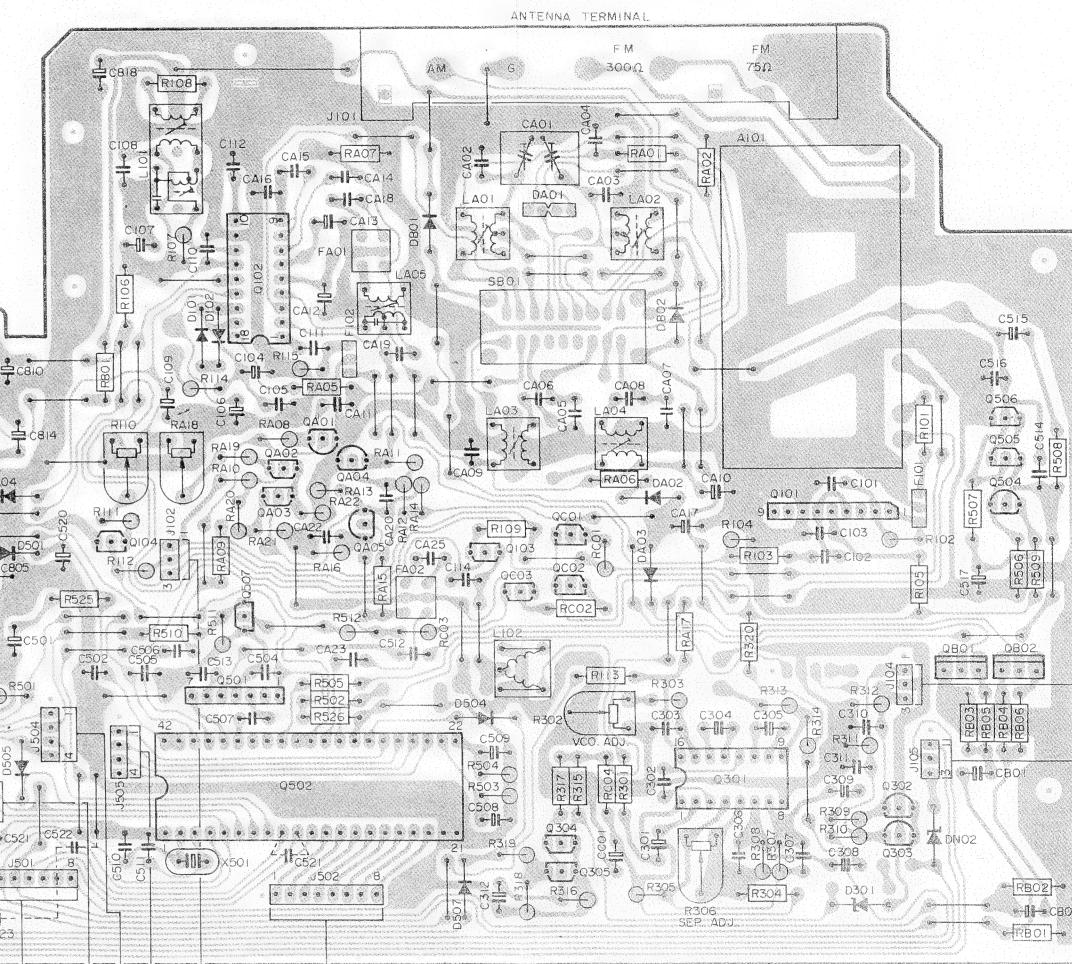
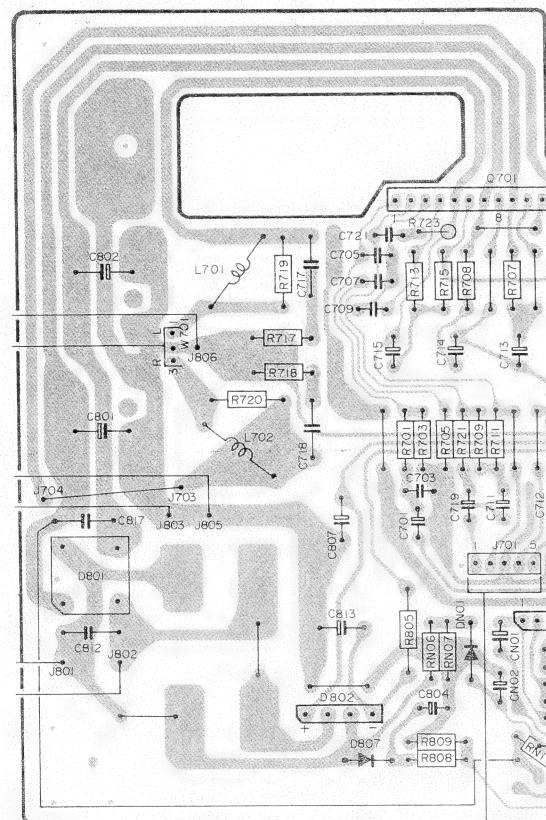
QV01: 1 = 11.8 V  
 2 = 0.2 V  
 3 = 0.2 V  
 4 = 0.2 V  
 5 = 0.2 V  
 6 = 0.2 V  
 7 = 11.9 V  
 8 = 12.2 V  
 9 = 0.1 V 1  
 10 = 0.1 V  
 11 = 0.1 V  
 12 = 0.1 V  
 13 = 0.1 V  
 14 = 0.1 V  
 15 = 0.1 V  
 16 = 0.1 V  
 17 = 0.1 V  
 18 = 0.1 V  
 19 = 0.1 V  
 20 = -10.9 V  
 21 = 0.1 V  
 22 = 10.9 V  
 23 = 12.2 V  
 24 = 10.9 V  
 25 = 10.8 V  
 26 = 10.8 V  
 27 = 10.8 V  
 28 = 12.1 V



## electron voltmeter

Q401:  $\begin{array}{r} 1 = \\ 2 = \\ 3 = \\ 4 = \\ 5 = \\ 6 = \\ 7 = \\ 8 = \end{array}$   $\begin{array}{r} 0 \\ 0 \\ 0 \\ -10 \\ 0 \\ 0 \\ 0 \\ 11.2 \end{array}$

## **MAIN AMPLIFIER (MAIN PANEL)**



QV02:

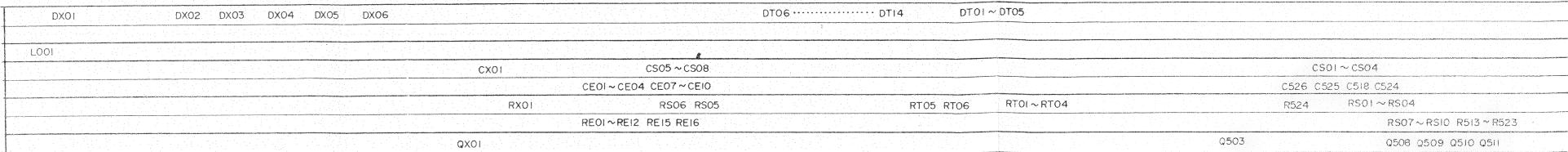
QN01: 1 = 0  
2 = 1  
3 =  
4 = 0  
5 = 0  
6 =  
7 =  
8 =  
9 = 1

$$\text{QN02: } B = -0.08 \text{ V} \\ C = 1.3 \text{ V} \\ E = 0 \text{ V}$$

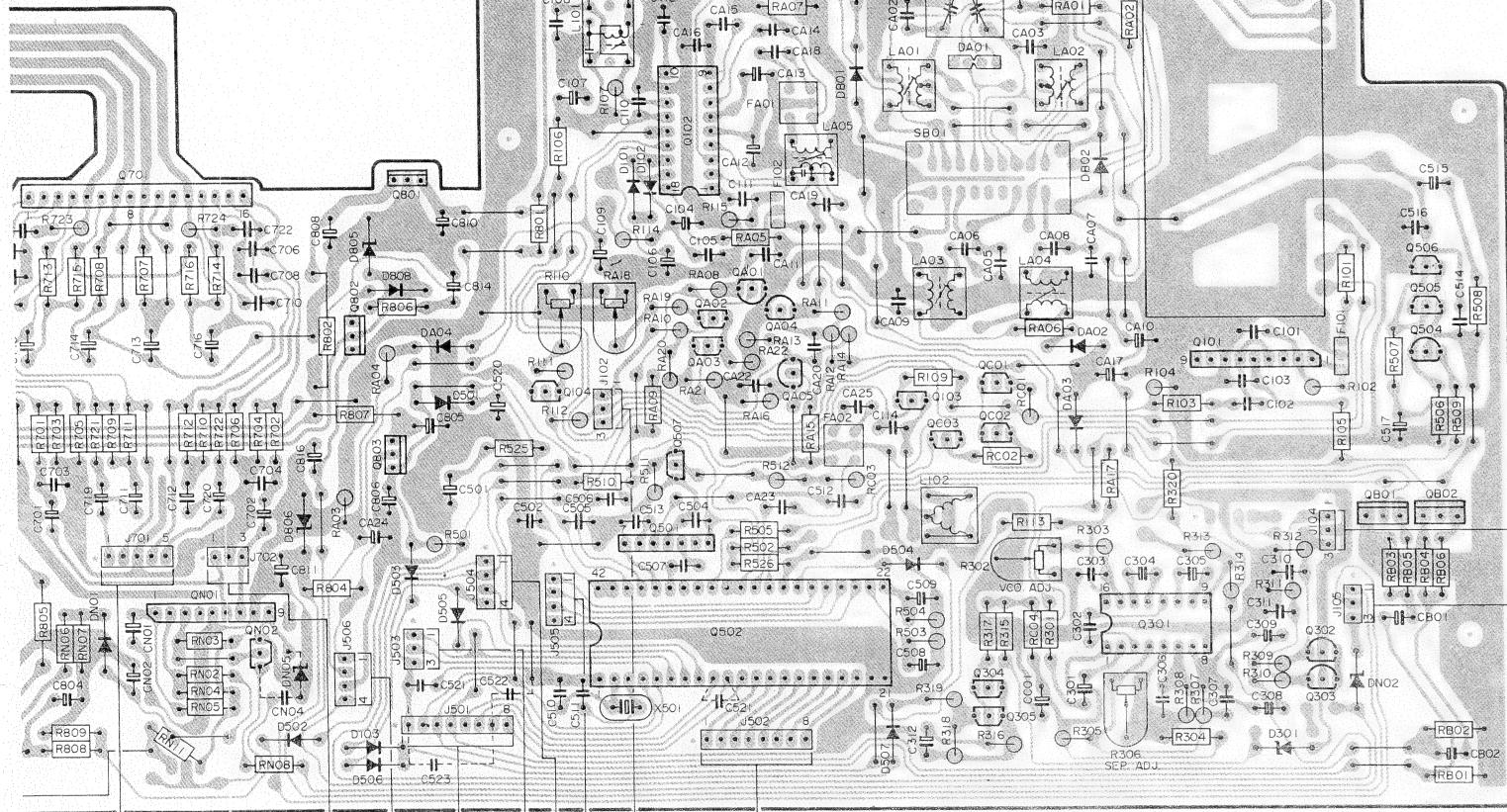
Q701:	1 = -300 mV	9 = +38 V
	2 = -300 mV	10 = +34 V
	3 = +33 V	11 = -38.8 V
	4 = -1.3 V	12 = $\approx$ 0 V
	5 = $\approx$ 0 V	13 = -1.3 V
	6 = -25.8 V	14 = +33 V
	7 = -38.8 V	15 = -300 mV
	8 = 0 V $\perp$	16 = -300 mV

D	DB01	DB02	DB07	DN01	DB06	DN05	D506	D501~D503	D505	DB05	DB08	DI03	DA04	DI01	DI02	DB01	DS07	DS04	DA01	DA03	DA02	DB02	D301	DN02																						
L		L701	L702											L101		LA05	LA01	LA03	LI02	LA04	LA02																									
C	CB02	C717	C721	C713~C716	C704	C722	C706	C808	C806	C810	C814	C818	C107~C112			CA09	CA02	CA01	CA04	CA10			C515	CV17																						
C	CB17	CB01	C718	CB07	C705	C701	C703	C712	C720	C702	C708	C710	CB11	CA24	C501	Q905	C502	C522	C521	C104~C106	CA11~CA16	CA18	CA19	C505	C508	CA06	CA05	CA03	CA08	CA07	CA17	C101	C310	C311	C516	CB01	CV14									
C	CB12				CB13	C709	C707	CB04	C719	C711	CN01	CN02	CN04	CB16	C521	C523	C520	C510	C511	C504~C507	C513	CA22	CA23	CA20	CA512	CA25	C114	C312	CC01	C301~C307	C103	C102	C309	C308	C517	CB02										
R		R719	R713	R715	R708	R707	R716	R714	R802	RA03	R806		R801	R106	R107	R108	R115	RA07			RA01	RA02				R312	R311	R101																		
R		R717	R701	R705	R709	R723	R712	R722	R724	R704	R804		R807	R525	R10~R112	R510	RA18~RA20	R511	R114	RA08	RA05	RA22	RA11~RA16	R109	RC02	RC01	RA06	R113	R304	R104	R308	R307	R314	R309	R310	R102	R506~R509									
R		R720	R718	R805	R808	RN06	RN07	R809	R703	R721	R711	RN11	R710	R706	R702	RN02~RN05	RN08	RA04	R501	RA10	RA09	RA21	R526	R502	R505	R512	RC03	R504	R503	R319	R318	R316	R317	R315	R302	RC04	R301	R303	R305	R317	R306	R320	R103	R13	R105	R801~R806
Q						Q701	QN01		QN02	Q802	Q801	Q803		Q104	Q501	Q507	Q102	Q502	QA01~QA05		Q103	Q304	Q305	QC01~QC03		Q301		Q101		Q302	Q303	QB01	QB02	Q504~Q506												

## **CONTROL PANEL (CONTROL SWITCHES - FIELDSTRENGTH IND. - VOLUME-BALANCE CONTR.)**



### **IER (MAIN PANEL)**

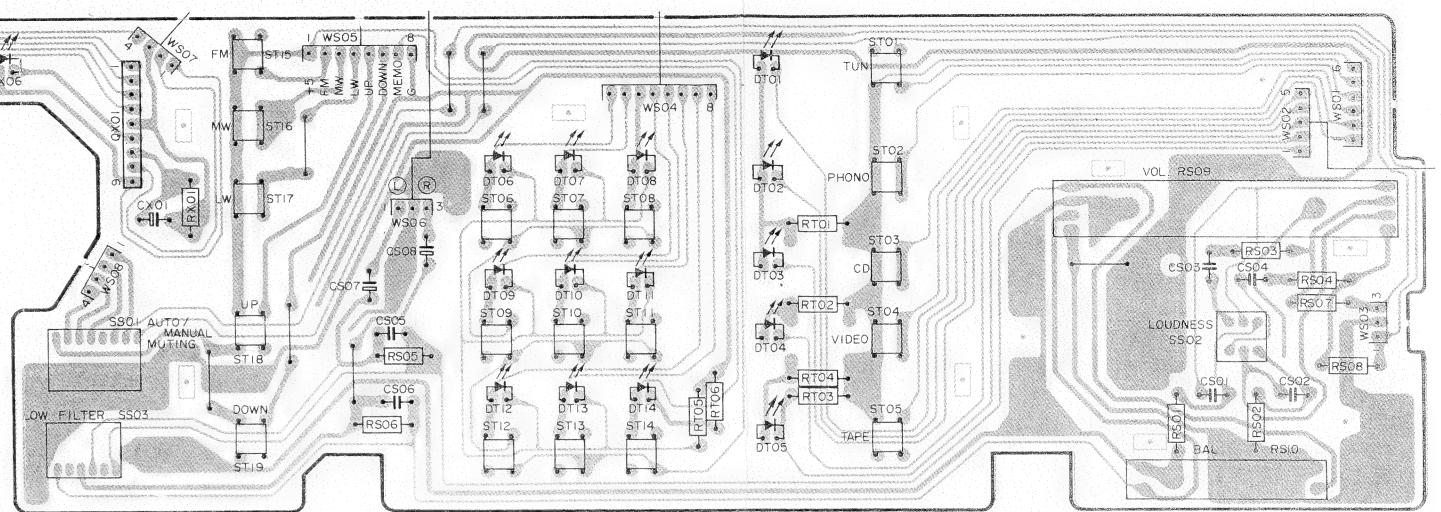


V03:	1 =	0	V	QN01:	1 =	0.75	V
	2 =	0	V		2 =	1.23	V
	3 =	0	V		3 =	1.3	V
	4 =	0	V		4 =	0.4	V
	5 =	-11.1	V		5 =	0	V
	6 =	-11.1	V		6 =	0	V
	7 =	-11.1	V		7 =	0	V
	8 =	0	V		8 =	0	V
	9 =	0	V		9 =	10.3	V
	10 =	0	V				
	11 =	0	V				
	12 =	12.0	V				
	13 =	12.0	V				
	14 =	12.0	V				

$$\begin{aligned} QN02: B &= -0.08 \text{ V} \\ C &= 1.3 \text{ V} \\ E &= 0 \text{ V} \perp \end{aligned}$$

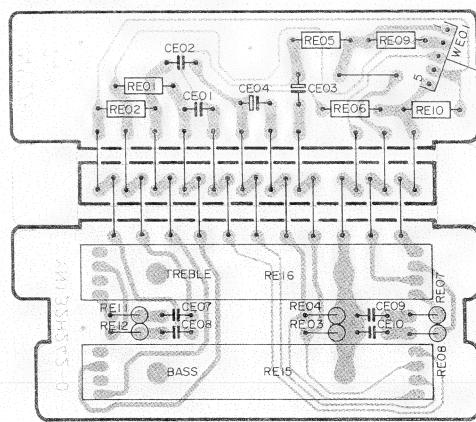
Q701: 1 = -300 mV  
2 = -300 mV  
3 = +33 V  
4 = -13 V

$$\begin{aligned}
 9 &= +38 \text{ V} \\
 10 &= +34 \text{ V} \\
 11 &= -38.8 \text{ V} \\
 12 &= \approx 0 \text{ V} \\
 13 &= -1.3 \text{ V} \\
 14 &= +33 \text{ V} \\
 15 &= -300 \text{ mV} \\
 16 &= -300 \text{ mV}
 \end{aligned}$$

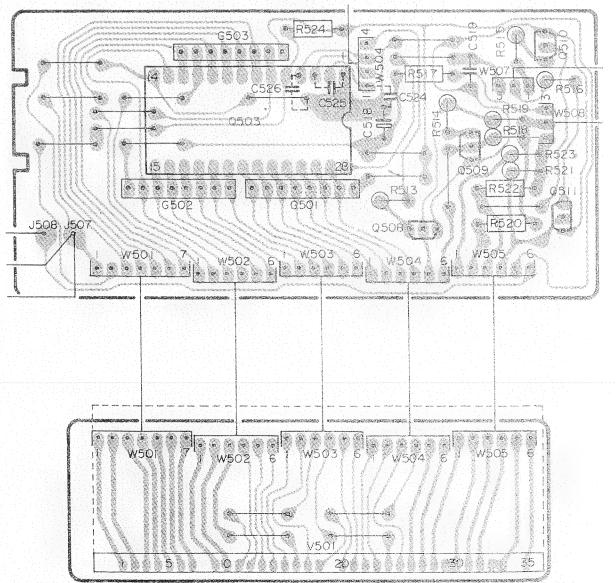


QX01: 1 = 13.8 V  
 2 = 13.7 V  
 3 = 13.7 V  
 4 = 13.5 V  
 5 = 0 V ]  
 6 = 11.7 V  
 7 = 0 V  
 8 = 0 V  
 9 = 15.1 V

## TONE CONTROL PANEL



## DISPLAY DRIVER + DISPLAY PANEL



## AM-IF

S-			Readout Display	Detune			Repeat
Tuner ST01 MW ST17	450 kHz $\Delta f$ 10 kHz (50 Hz) via 33 nF				 Center max	 Symmetrical max	

## AM-RF

S-			Readout Display	Detune			Repeat
Tuner ST01 MW ST17				522 kHz	LA03	 DC 1.0 V	
Tuner ST01 LW ST16				153 kHz	LA04	 DC 1.5 V	
Tuner ST01 MW ST17	603 kHz $+1 \text{ kHz mod. } 30\%$				LA01		
	1 404 kHz $+1 \text{ kHz mod. } 30\%$				CA01-1	 Max.	
Tuner ST01 LW ST16	170 kHz $+1 \text{ kHz mod. } 30\%$				LA02		
	350 kHz $+1 \text{ kHz mod. } 30\%$				CA01-2		

## AM-AUTO STOP

S-			Readout Display	Detune			Repeat
Tuner ST01 MW ST17	999 kHz $+1 \text{ kHz mod. } 30\%$ Output 500 $\mu\text{V}$				RA18	 2	

## ALLGEMEINES

- Während des HF/FM-Abgleichs den HF-Pegel möglichst niedrig halten.
- Abgleich der ZF-Stufe erfordert ein Hubsignal.  
FM/ZF: Signal von 10,7 MHz mit einem Hub von 300 kHz bei einer Frequenz von 50 Hz einspeisen.
- AM/ZF: Signal von 450 kHz mit einem Hub von 9 kHz bei einer Frequenz von 50 Hz einspeisen.

## Benötigte Apparatur

- HF-Generator
- Oszilloskop
- DC-Millivoltmeter
- AC-Millivoltmeter
- Frequenzmesser
- Stereocodierer

- 1 Spalte der Bandpasskurve durch Verlagerung der Hubfrequenz in die Bildmitte bringen.
- 2 Die Einstellung muss erfolgen an einem Punkt, an dem die Spannungsanzeige auf etwa 1,8 V vom Nullpunkt aus geändert wird.

## FM-IF

S-			Readout Display	Detune			Repeat
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz $+1 \text{ kHz mod. }$ Deviation 40 kHz Maintain RF level below limit.				A101-IFT (Frontend)	 Max. output Min. Distortion	

## FM-RF

S-			Readout Display	Detune			DC mV meter $\pm 0 \text{ mV}$
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz $+1 \text{ kHz mod. }$ Deviation 40 kHz Output 1 mV				L101-A		
					L101-B	 Min. Distortion	

## FM MUTING

S-			Readout Display	Detune			Frequency counter $6 \text{ } 19 \text{ kHz}$
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz no mod. Output 1 mV				R110		

## STEREO DECODER

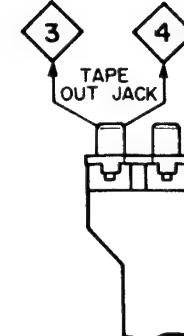
S-			Readout Display	Detune			Frequency counter $6 \text{ } 19 \text{ kHz}$
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz no mod. Output 1 mV				R302		

## STEREO DISTORTION

S-			Readout Display	Detune			Frequency counter $6 \text{ } 19 \text{ kHz}$
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz $+1 \text{ kHz mod. }$ Deviation L + R 40 kHz Pilot 6%				A101-IFT (Frontend) L101-A, B		

## STEREO SEPARATION

S-			Readout Display	Detune			Frequency counter $6 \text{ } 19 \text{ kHz}$
Tuner ST01 FM ST15 FM Muting  SS01	98 MHz $+1 \text{ kHz mod. }$ Deviation L + R 40 kHz Pilot 6%				R306		



## FM-IF

S-			Readout Display	Detune			Repeat
Tuner ST01 FM ST15 FM Muting SS01	98 MHz +1 kHz mod. Deviation 40 kHz Maintain RF level below limit.				A101-IFT (Frontend)	3 - (4) Max. output Min. Distortion	

## FM-RF

S-			Readout Display	Detune			
Tuner ST01 FM ST15 FM Muting SS01	98 MHz +1 kHz mod. Deviation 40 kHz Output 1 mV				L101-A		DC mV meter 5 ±0 mV
					L101-B	3 - (4) Min. Distortion	

## FM MUTING

S-			Readout Display	Detune			
Tuner ST01 FM ST15 FM Muting SS01	98 MHz +1 kHz mod. Deviation 40 kHz Output 12.5 µV				R110	3 - (4)	

## STEREO DECODER

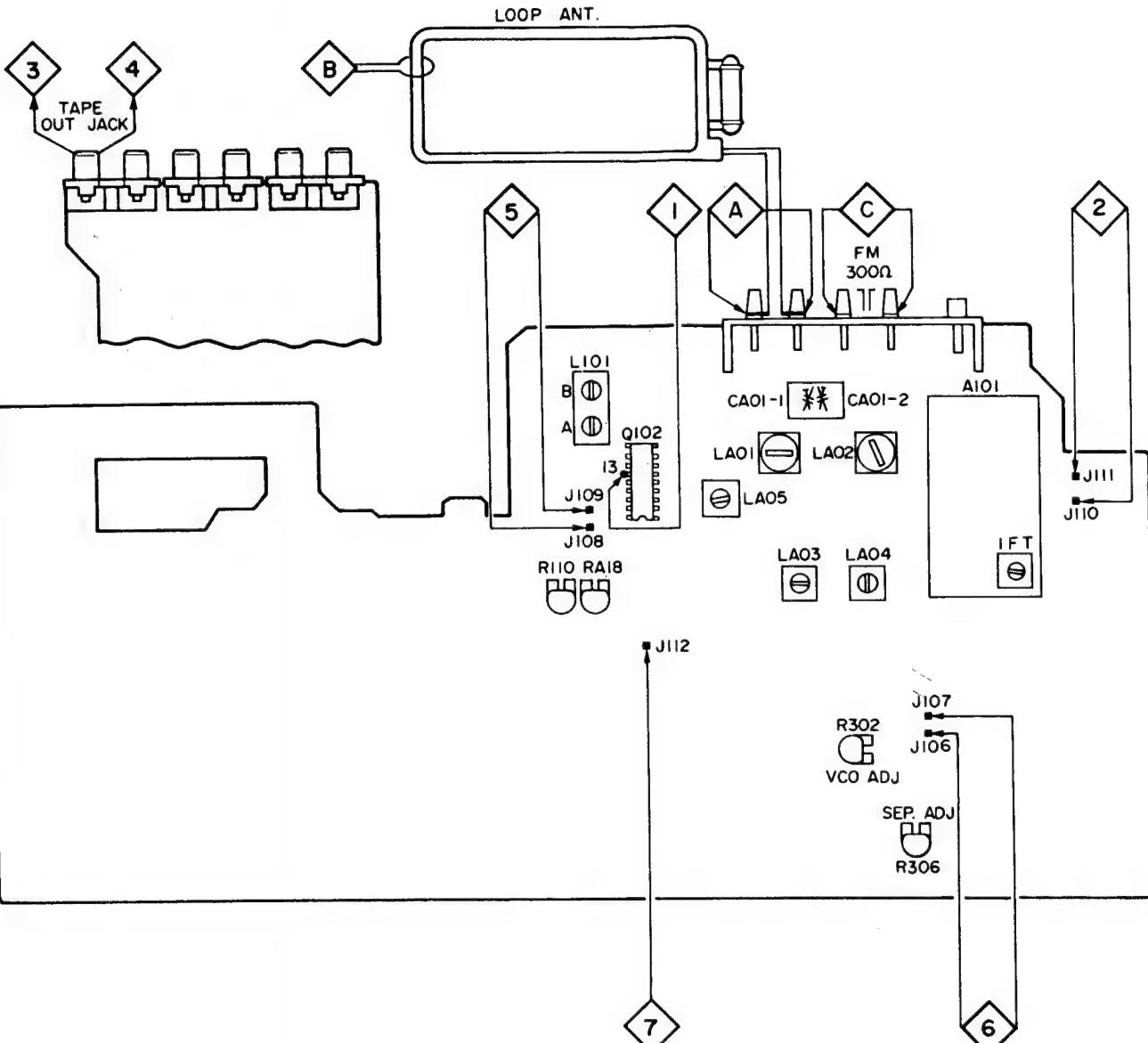
S-			Readout Display	Detune			
Tuner ST01 FM ST15 FM Muting SS01	98 MHz no mod. Output 1 mV				R302		Frequency counter 6 19 kHz

## STEREO DISTORTION

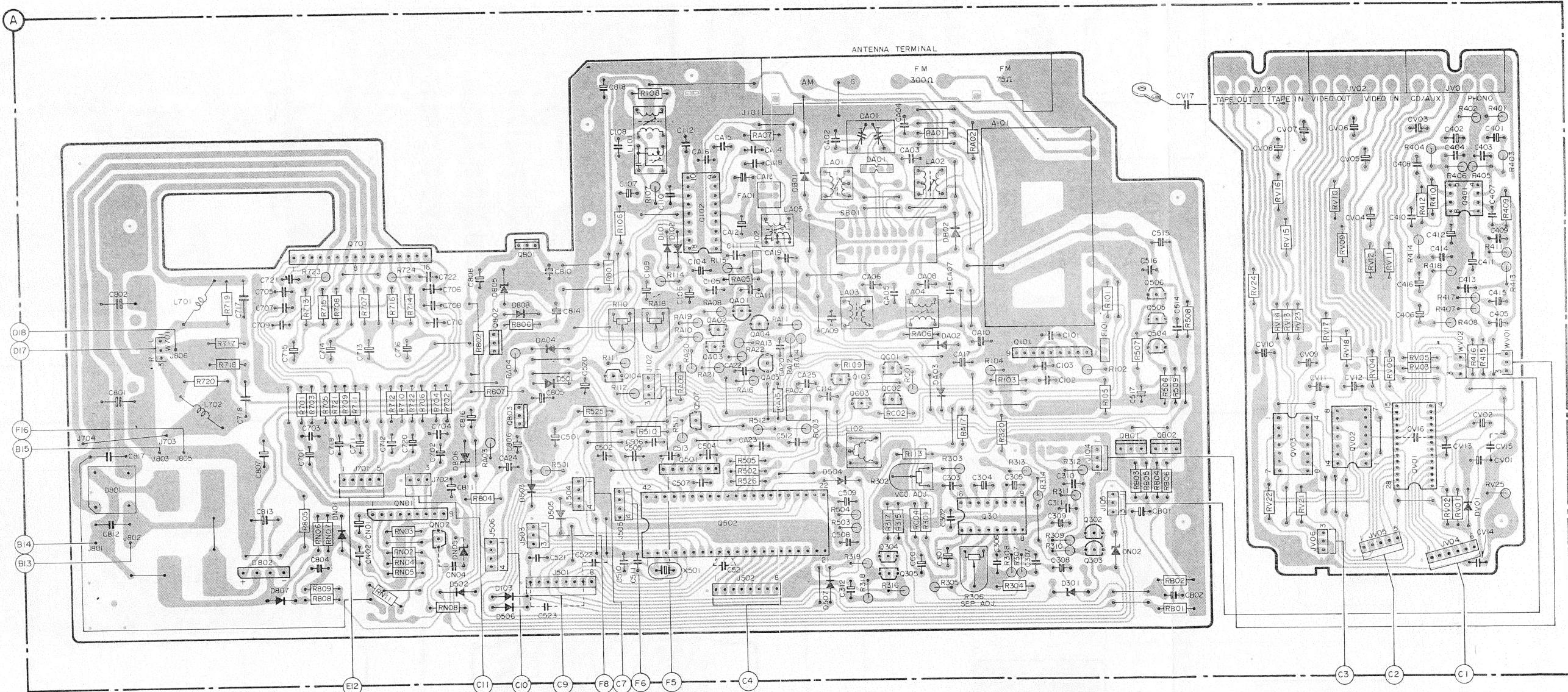
S-			Readout Display	Detune			
Tuner ST01 FM ST15 FM Muting SS01	98 MHz +1 kHz mod. Deviation L + R 40 kHz Pilot 6%				A101-IFT (Frontend) L101-A, B	3 - 4	

## STEREO SEPARATION

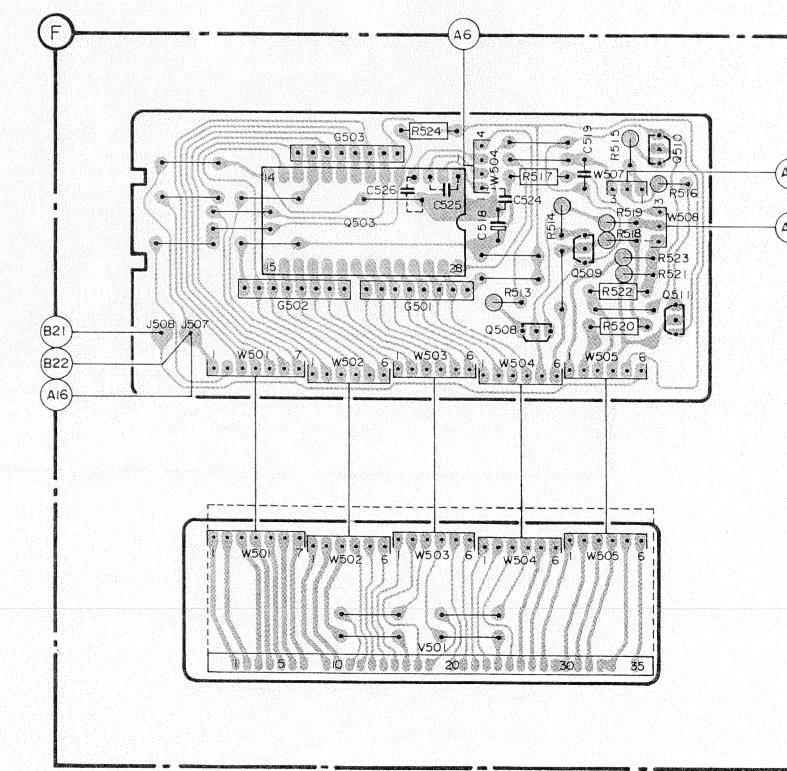
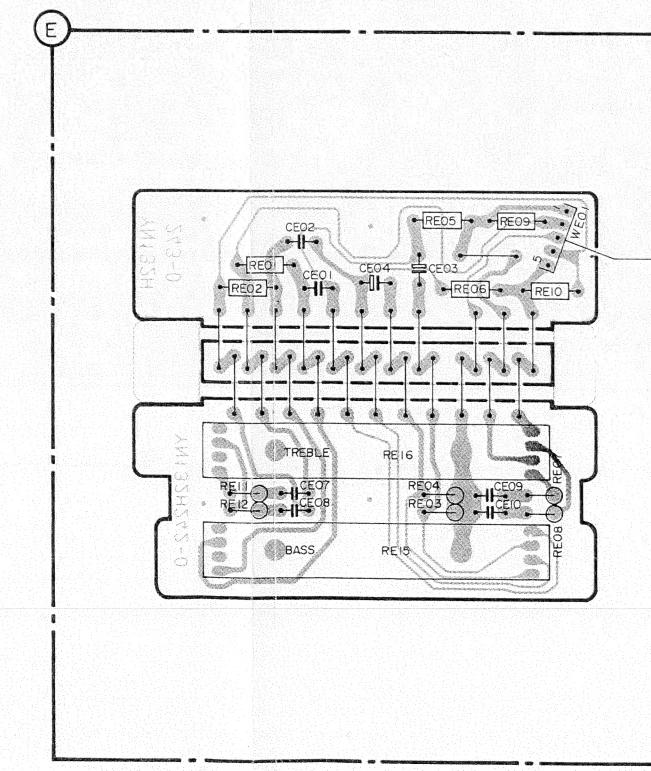
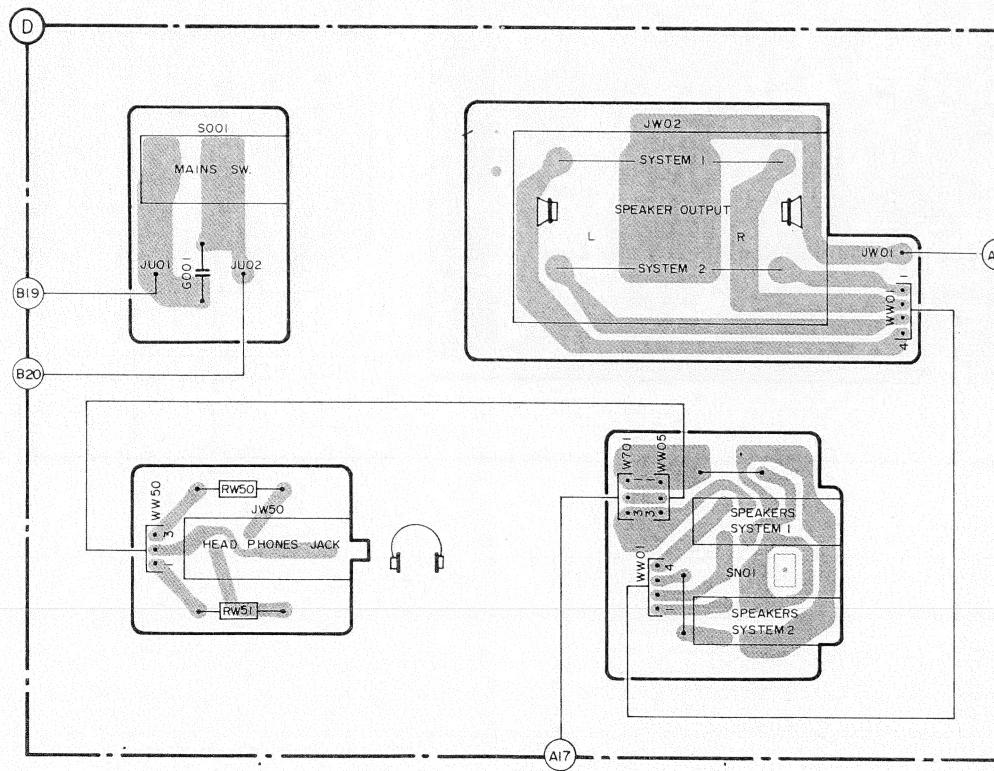
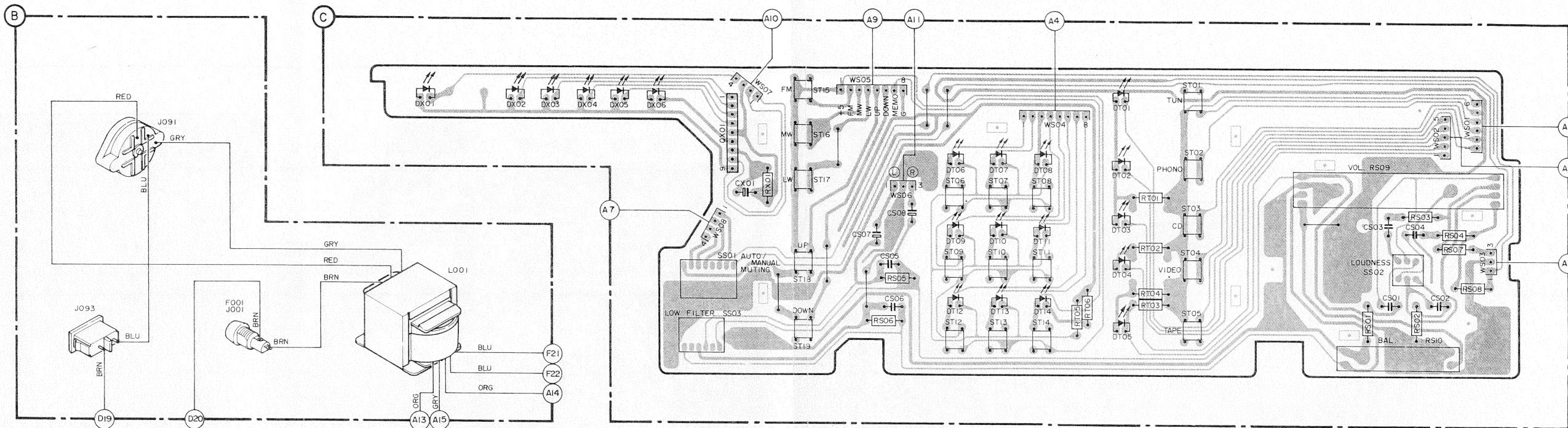
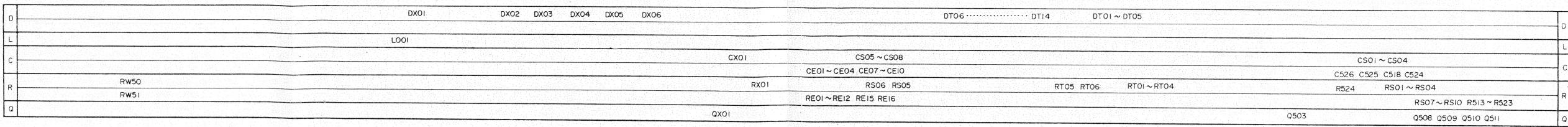
S-			Readout Display	Detune			
Tuner ST01 FM ST15 FM Muting SS01	98 MHz +1 kHz mod. Deviation L + R 40 kHz Pilot 6%				R306	3 - 4	



## WIRING DIAGRAM 1 (MAIN PANEL - PHONO/INPUT PANEL)

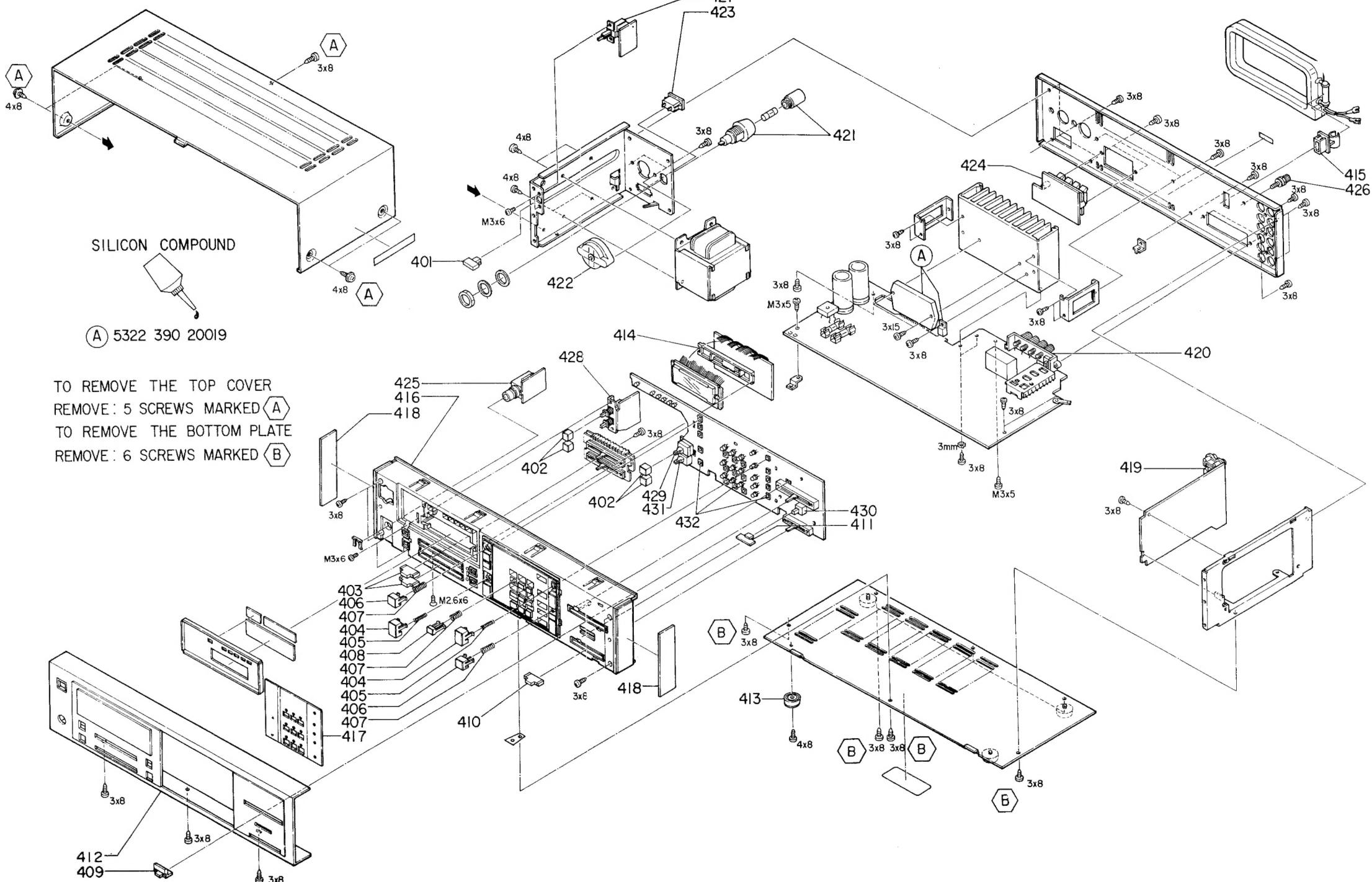


WIRING DIAGRAM 2 (CONTROL PANEL - TONE CONTROL PANEL - DISPLAY - SPEAKER SWITCH - SPEAKER OUTPUT - HEADPHONE - POWER SUPPLY)

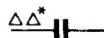
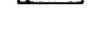
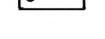
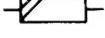
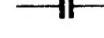
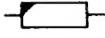
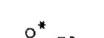


F5232

401	4822 410 23267
402	4822 410 23219
403	4822 411 60972
404	4822 410 23229
405	4822 492 51598
406	4822 410 23224
407	4822 492 51599
408	4822 410 23222
409	4822 411 60969
410	4822 411 60971
411	4822 410 23221
412	4822 426 50641
413	4822 462 40636
414	4822 466 91467
415	4822 256 90548
416	4822 404 20505
417	4822 459 50317
418	4822 426 60253
419	4822 267 30519
420	4822 267 10133
421	4822 256 30233
422	4822 263 30095
423	4822 265 20222
424	4822 267 20233
425	4822 267 30518
426	4822 267 40505
427	4822 276 11141
428	4822 276 11198
429	4822 276 11199
430	4822 276 11197
431	4822 276 11196
432	4822 276 11195



C		D	
C501	Elco 47000 $\mu$ F 5.5 V	4822 122 32007	D101~D103 1S2473C 4822 130 32163
C510	Cer. cap 27 pF 50 V	4822 122 32005	D301 MA1091H 4822 130 32171
C511	Cer. cap 82 pF 50 V	4822 122 32006	D501~D507 1S2473C 4822 130 32163
C801,C802	Elco 6800 $\mu$ F 45 V	4822 124 21399	D801 S4VB 4822 130 32174
CA01	Trimmer 2 x 16 pF	4822 125 60099	D802 DBA10B 4822 130 32175
G001	Cer. cap 0.0047 $\mu$ F 400 V	4822 122 32017	D805,D806 MA1110M 4822 130 32176
R			D807 DSF10C 4822 130 32164
R110	Trim potm. 10 k $\Omega$	4822 100 10472	D808 1S2473C 4822 130 32163
R302	Trim potm. 5 k $\Omega$	4822 100 10627	DA01 KV-1236Z Z3 4822 125 30034
R306	Trim potm. 500 k $\Omega$	4822 100 10628	DA02~DA04 1S2473C 4822 130 32163
R509	Safety res. 150 $\Omega$ 1/4 W	4822 111 30802	DB01,DB02 DSF10 C 4822 130 32164
R517	Safety res. 220 $\Omega$ 1/4 W	4822 111 30803	DN01 1S2473C 4822 130 32163
R707	Fusible res. 180 $\Omega$ 1/4 W	4822 111 30805	DN02 MA1091H 4822 130 32171
R708	Fusible res. 560 $\Omega$ 1/4 W	4822 111 30808	DN05 MA1091 4822 130 32109
R717,R718	Safety res. 22 $\Omega$ 1 W	4822 111 41132	DT01~DT05 SEL1410E 4822 130 32177
R719,R720	Safety res. 2.2 $\Omega$ 1/2 W	4822 115 90175	DT06~DT14 SEL1210S 4822 130 32178
R801	Fusible res. 33 $\Omega$ 1/4 W	4822 111 30807	DV01 1S2473C 4822 130 32163
R802	Fusible res. 15 $\Omega$ 1/2 W	4822 111 50477	DX01~DX04 SLP-981C 4822 130 32179
R804	Fusible res. 68 $\Omega$ 1/4 W	4822 111 30809	DX05,DX06 SLP-281F 4822 130 32181
R805	Fusible res. 220 $\Omega$ 1/4 W	4822 111 30806	
R807	Safety res. 820 $\Omega$ 1 W	5322 116 55263	
RA18	Trim potm. 10 k $\Omega$	4822 100 10472	
RC04	Fusible res. 47 $\Omega$ 1/4 W	4822 115 90178	
RE15,RE16	Treble/bass potm. 2x100 k $\Omega$	4822 100 20111	
RN11	Safety res. 2.7 k $\Omega$ 1/2 W	4822 111 41134	
RS09	Vol. potm. 2x100 k $\Omega$	4822 100 20112	
RS10	Balance potm. 200 k $\Omega$	4822 100 20113	
RW50,RW51	Safety res. 330 $\Omega$ 1 W	4822 111 41133	
G501~G503	Res. compo. 7x10 k $\Omega$	4822 111 90405	
L-F			
L001	Mains transformer	4822 146 20833	
L051	Loop antenna	4822 157 51734	
L101	Coil FM	4822 157 51738	
L102	Coil FM	4822 157 51723	
L701,L702	Coil	4822 157 51739	
LA01	Coil MW Ant.	4822 157 51736	
LA02	Coil LW Ant.	4822 157 51735	
LA03	Coil MW OSC	4822 157 51741	
LA04	Coil LW OSC	4822 157 51742	
LA05	Coil MW IFT	4822 157 51737	
F101,F102	Cer. filter 10.7 MHz	4822 242 70335	
FA01,FA02	Cer. filter 450 kHz	4822 242 70723	
<b>Miscellaneous</b>			
A101	Tuner unit	4822 210 10246	
F001	Fuse 630 mA 250 V	4822 253 30018	
SB01	Solenoid switch	4822 281 50097	
V501	Display unit	4822 130 90152	
X501	7.2 MHz	4822 242 70722	

	0.125 W or 0.2 W (CR16)	$\leq 220 \text{ k}\Omega$ $> 270 \text{ k}\Omega$	5% 10%		Ceramic plate
	0.33 W (CR25)	$\leq 1 \text{ M}\Omega$ $> 1 \text{ M}\Omega$	5% 10%		Polyester flat foil
	0.33 W (SFR25)		5%		Polyester mepolesco
	0.25 W (VR25)	$\leq 10 \text{ M}\Omega$ $> 10 \text{ M}\Omega$	5% 10%		Mylar (Polyester flat foil small sized)
	0.5 W (CR37)	$\leq 1 \text{ M}\Omega$ $> 1 \text{ M}\Omega$	5% 10%		Micropoco
	0.67 W (CR52)		5%		Tubular ceramic (body colour pink or yellow/green)
	1 W or 1.15 W (CR68)		5%		Miniature single elco
					Subminiature tantalum cap.

\* a = 2,5 V  
b = 3,15 V  
or 4 V  
c = 6,3 V  
d = 10 V  
e = 16 V  
f = 25 V  
g = 40 V  
h = 63 V  
j = 100 V  
l = 125 V  
m = 150 V  
n = 160 V  
q = 200 V  
r = 250 V  
s = 300 V  
t = 350 V  
u = 400 V  
v = 500 V  
w = 630 V  
x = 1000 V  
A = 1,6 V  
B = 6 V  
C = 12 V  
D = 15 V  
E = 20 V  
F = 35 V  
G = 50 V  
H = 75 V  
I = 80 V